

Described from one male collected at Portland, Oregon, September 5, 1940, by F. C. and V. H. Harmston. Holotype deposited in the U. S. National Museum.

*Taxonomy:* *Syntormon oregonensis*, n. sp., is readily distinguished from other described species of the genus by the wholly black posterior tibiae together with the yellow fore and middle femora; no other known species of *Syntormon* occurring in North America has the above combination of leg colors. It is much like *affinis* Wheeler in general appearance, but in that species the fore coxae are wholly darkened and the posterior tibiae are blackened only on the apical third.

### THE TAXONOMIC STATUS OF THE SO-CALLED "COMMON RED SPIDER."

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#### ABSTRACT

For many years the term "common red spider" has been applied to what was believed to be a single, widespread species of spinning mite of the genus *Tetranychus*. The scientific name *Tetranychus telarius* (L.) has been most commonly applied to this presumably single species. From the information now available it is indicated that the species *T. telarius* (L.) is not present in the United States and that the term "common red spider" has been applied indiscriminately to two species, *T. althaeae* Von Hanst. and *T. bimaculatus* Harv.

In 1758 Linnaeus<sup>1</sup> described a mite from the linden tree in Europe under the name *Acarus telarius*. The species was later referred to the genus *Tetranychus*, although Linnaeus' description was so vague that it might have applied to almost any spinning mite, and it would be impossible to establish the identity of *telarius* with reasonable certainty if it were not for the fact that Linnaeus recorded the linden tree as its natural host.

In 1901 Von Hanstein<sup>2</sup> described a mite (*Tetranychus althaeae*) from hollyhock in Europe. In addition to Von Hanstein, Tra-gardh<sup>3</sup> and Zacher<sup>4</sup> showed that *T. althaeae* is very distinct from *T. telarius*. The author has studied named specimens of these mites, sent to him by Zacher and others, and finds them to be distinct, one from the other.

With the establishment of the morphological differences between *Tetranychus telarius* and *T. althaeae*, observations were

<sup>1</sup> Syst. Nat. (ed. 10), vol. 1, 1758, p. 616.

<sup>2</sup> Ztschr. f. Wiss. Zool., vol. 70, 1901, p. 74, pl. 6, figs. 1, 2, 4, 5.

<sup>3</sup> [Sweden] Centralanst. för Försöksv. på Jordbruksområdet, Meddel. 109, No. 20, 1915, pp. 42, 43, figs. 19, 20.

<sup>4</sup> K. Biol. Anst. f. Land u. Forstw., Mitt., No. 14, 1913, pp. 39-40.

recorded as to the host plants on which they occurred in Europe. The former was found to occur chiefly on linden and maple; the latter, on hollyhock, violet, garden beans, hops, and many annual plants in greenhouses.

In the course of the routine work of identifying spinning mites, the writer has accumulated data on the species occurring throughout the United States. The "linden mite," *Tetranychus telarius* (L.) (as accepted by Zacher, Von Hanstein, and Tragardh), has never been identified from America. A spinning mite has frequently been received from various parts of the United States and from Canada and Hawaii which appears to be identical with *T. althaeae* Von Hanst.

In addition to *Tetranychus althaeae*, a mite is often received from many points in the United States which is closely related to it. This mite, *T. bimaculatus* Harv., was described by Harvey<sup>5</sup> in 1893 from a variety of cultivated plants at Orono, Maine. The writer has examined named specimens of *bimaculatus* collected by Harvey at the type locality (Orono, Maine). In addition, he has studied material from Orono recently received from Dr. F. H. Lathrop. Although, as above stated, this mite is very closely related to *T. althaeae*, it appears to differ consistently in the form of the penis and in the structure of the tarsal appendages of leg I of the male. Therefore it is believed that Harvey's name (*T. bimaculatus*) is a valid one.

Actually it is difficult to say whether *Tetranychus althaeae* or *T. bimaculatus* is the more common species in the United States. Both these mites have been identified from numerous localities in many parts of the United States, and occasionally from Canada. Of the lots of these two species in the writer's collection, 63 percent are of *bimaculatus* and 37 percent are of *althaeae*. These figures should not be taken too seriously, however, since many lots of mites examined were not retained by the writer.

In the case of several American mites of the genus *Tetranychus*, the female individuals are so alike that no means of identifying them specifically has yet been discovered. This has led to much confusion in the way of incorrect citations of species in the literature, especially since female specimens were usually sent to specialists for study. Since access to male spinning mites is necessary for accurate identifications, and since the male structure has been known and employed only in recent years, it follows that the earlier references in the literature can carry little weight as to the species concerned. Color variations due to differences in host plants have also been a factor adding to the confusion.

When the foregoing facts are considered, it would seem indicated that published references to the so-called "common red

<sup>5</sup> Maine Agr. Expt. Sta. Ann. Rpt. for 1892, pub. 1893, p. 133, pl. 3, figs. 1-4.

spider" can be of little assistance in determining which species has been most commonly reported in the United States.

Finally, it may be repeated that the writer agrees with several leading acaridologists of Europe that *Tetranychus* (*Eotetranychus*) *telarius* (L.) of Europe cannot be identical with the American mite known commonly under *telarius* and *bimaculatus*.

In Plate 2 are shown the differences in the structure of the penis and tarsal appendages as between *Tetranychus telarius*, *T. althaeae*, and *T. bimaculatus*. Briefly, these differences may be presented as follows:

#### ***Tetranychus telarius* (L.).**

*Penis*.—Basilar lobe a mere obtuse-angled prominence, shaft gradually attenuated, ending in a thin tip without barb, curving very slightly upward. *Tip of tarsus*: Distal element (corresponding to the main claw) straight, relatively weak, the proximal portion (analogous to the deflexed spurs in certain genera) almost three times as thick at base as distal spur, split nearly two-thirds its length into six subequal, distinct spurs, these in two series of three each.

#### ***Tetranychus althaeae* Von Hanst.**

*Penis*.—Basilar lobe approximately right-angled, shaft about five times as thick proximally as thickness of hook, which is bent upward about 90 degrees from axis of shaft, hook terminating in a conspicuous barb which bears an acute tip both anteriorly and posteriorly. *Tip of tarsus*: Distal element (corresponding to the main claw) straight and relatively weak, the proximal portion little more than twice as thick at base as distal spur, split for a short distance into six closely appressed spurs which are graduated in length, the ventralmost pair the longest, these proximal spurs in two series of three each.

#### ***Tetranychus bimaculatus* Harv.**

*Penis*.—Basilar lobe a narrowly rounded boss, directed upward and backward, shape of shaft and hook similar to that of *althaeae*, but with all parts relatively smaller, hook terminating in a small barb which bears an acute tip anteriorly, but having a barely discernible boss posteriorly. *Tip of tarsus*: Distal claw element much like that of *althaeae*, the proximal portion about three times as thick at base as distal spur, and comprising mainly the two ventralmost paired spurs, the other four spurs barely discernible.